

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

VR OPTICS, LLC,

Plaintiff,

-v-

PELOTON INTERACTIVE, INC.,

Defendant.

16-CV-6392 (JPO)

OPINION AND ORDER

PELOTON INTERACTIVE, INC.,

Third-Party Plaintiff,

-v-

VILLENCY DESIGN GROUP, LLC, ERIC
VILLENCY, and JOSEPH COFFEY,

Third-Party Defendants.

J. PAUL OETKEN, District Judge:

This is a patent infringement case involving interactive exercise equipment, in which Plaintiff VR Optics, LLC (“VR Optics”) brings claims of patent infringement against Defendant Peloton Interactive, Inc. (“Peloton”). Now pending before the Court are the parties’ memoranda on claim construction. (*See* Dkt. Nos. 75, 77, 81, 85-1.) The Court held a *Markman* hearing on August 2, 2018. (*See* Minute Entry, August 2, 2018.) Having considered the parties’ arguments and briefing on claim construction, the Court construes the disputed terms as outlined below.

I. Background

This opinion deals with a subset of the claims in this case: the patent dispute between VR Optics and Peloton. VR Optics owns U.S. Patent No. 6,902,513 (“the ’513 patent”), titled

“Interactive Fitness Equipment.” (Dkt. No. 1 ¶ 12; Dkt. No. 1-1.) VR Optics alleges that Peloton makes and sells interactive exercise equipment that infringes on VR Optics’ patent. (Dkt. No. 1 ¶ 20.)

The parties submitted a Joint Disputed Claim Terms Chart on February 23, 2018. (Dkt. No. 69-1.) Each party submitted an opening claim construction brief on April 13, 2018, followed by a responsive claim construction brief on May 11, 2018. (Dkt. Nos. 75, 77, 79, 81.)¹ The Court held a *Markman* hearing on August 2, 2018. (See Minute Entry, August 2, 2018.) The Court is now prepared to rule on the proper construction of the disputed claim terms in the ’513 patent.

II. Legal Standards

A. Claim Construction

The claim construction analysis is substantially guided by the Federal Circuit’s decisions in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc). Claim construction is an issue of law properly decided by the Court. *Markman*, 52 F.3d at 970–71. “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)).

In construing the meaning of the claims, the starting point and primary source is the intrinsic evidence. *Phillips*, 415 F.3d at 1313–14. The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See id.* at 1314. The general rule—

¹ On May 21, 2018, Plaintiff VR Optics submitted a corrected response brief with a modified table of contents. (Dkt. No. 85.) Subsequent citations to VR Optics’ response brief will refer to the corrected response brief at Docket Number 85-1.

subject to certain exceptions—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent and intrinsic evidence. *See id.* at 1312–13. “There is a heavy presumption that claim terms are to be given their ordinary and customary meaning.” *Mass. Inst. of Tech. v. Shire Pharm., Inc.*, 839 F.3d 1111, 1118 (Fed. Cir. 2016) (quoting *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013)).

The Federal Circuit, in *Phillips*, rejected any claim construction approach that sacrificed the intrinsic record—including the specification—in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court disparaged the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before turning to the specification. *Phillips*, 415 F.3d at 1319–24. *Phillips* does not, however, preclude all uses of extrinsic evidence in claim construction proceedings. Instead, the court assigned extrinsic evidence a role subordinate to that of the intrinsic record. With respect to dictionaries, the Federal Circuit noted that, “[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words. In such circumstances, general purpose dictionaries may be helpful.” *Id.* at 1314 (citation omitted).

The Federal Circuit has not imposed any particular sequence of steps for a district court to follow when it considers disputed claim language. *See id.* at 1324. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed

claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

B. Indefiniteness Under 35 U.S.C. § 112, ¶ 2

Section 112 requires that a patent specification “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112, ¶ 2.² The Supreme Court has read this provision to require that “a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). Indefiniteness must be proven by clear and convincing evidence. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017).

“[C]laims involving terms of degree are [not] inherently indefinite.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017). “[A]bsolute precision is unattainable” when drafting patent claims. *Nautilus*, 134 S. Ct. at 2129. “Thus, ‘a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.’” *Sonix Tech.*, 844 F.3d at 1377 (quoting *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1384 (Fed. Cir. 2005)). Instead, “the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.” *Nautilus*, 134 S. Ct. at 2130 (quoting *Minerals Separation, Ltd. v. Hyde*, 242 U.S. 261, 270 (1916)).

² Congress amended Section 112 as part of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 4(c), 125 Stat. 284, 296 (2011). Because the ’513 patent was filed prior to this amendment, the pre-amendment version of Section 112 governs. See *Sonix Tech. Co., Ltd. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1371 n.1 (Fed. Cir. 2017).

C. Indefiniteness Under 35 U.S.C. § 112, ¶ 6

Section 112, ¶ 6 allows patentees to engage in what is referred to as means-plus-function claiming. The statute provides that “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.” 35 U.S.C. § 112, ¶ 6. However, such claims must “be construed to cover [only] the corresponding structure, material, or acts described in the specification and equivalents thereof.” *Id.*

In accordance with the statute’s plain terms, the Federal Circuit has interpreted this provision to permit patentees to express patent claims in the form of a specific function or functions to be performed without reciting a structure for performing that function as part of the claim term. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347 (Fed. Cir. 2015). In order to do so, however, the patentee is required to disclose in the specification a corresponding structure for performing each claimed function or functions. *Id.* The scope of the claim is then to be construed as limited to the claimed functions when performed by those corresponding structures described in the specification. *Id.*

Courts construing claims asserted to be subject to Section 112, ¶ 6 must engage in a two-part inquiry. First, courts must make an “assessment of whether the limitation in question is a means-plus-function term subject to the strictures of § 112, [¶] 6.” *Id.* at 1348. Where the claim limitation does not recite the word “means,” there is a rebuttable presumption that Section 112, ¶ 6 does not apply. *Id.* This presumption is not a “strong” one, *id.* at 1349, and can be overcome “if the challenger [asserting indefiniteness] demonstrates that the claim term fails to ‘recite[] sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function,’” *id.* at 1348 (alteration in original) (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)). Still, the challenger asserting the applicability of Section 112,

¶ 6 to a claim term lacking the word “means” must overcome the contrary presumption by a preponderance of the evidence, in reliance on intrinsic and extrinsic evidence as interpreted through the lens of traditional claim construction principles. *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007 (Fed. Cir. 2018).

Second, once a court concludes that Section 112, ¶ 6 governs a claim limitation, it must “determine whether the specification discloses sufficient structure that corresponds to the claimed function.” *Williamson*, 792 F.3d at 1351. “The party alleging that the specification fails to disclose sufficient corresponding structure must make that showing by clear and convincing evidence.” *TecSec, Inc. v. Int’l Bus. Machs. Corp.*, 731 F.3d 1336, 1349 (Fed. Cir. 2013). A court’s analysis of whether that showing has been made proceeds in two stages: First, the court must identify all of the claimed functions in the relevant limitation; and second, the court looks to see whether the specification discloses adequate corresponding structure for each of the claimed functions. *Williamson*, 792 F.3d at 1351–52. Where the patentee fails to disclose structures in the specification corresponding to each claimed function, the court must construe the relevant claim term as indefinite. *Id.* at 1352.

III. Discussion

As a threshold matter, the Court must decide who would be “a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313.

VR Optics posits that such a person of ordinary skill in the art (or “POSITA”) would be “an engineer with at least a bachelor’s level degree in engineering and two or more years working as an engineer designing and/or developing computerized fitness or exercising equipment.” (Dkt. No. 75 at 10.)

Peloton does not offer any proposal regarding a POSITA at the time of the '513 patent. When pressed for a position on this question during the *Markman* hearing, counsel for Peloton refused to agree to VR Optics' proposed POSITA, but also declined to offer a competing proposal or to articulate any specific objections or issues with VR Optics' proposal.

As VR Optics' proposed POSITA is consistent with evidence in the record (*see, e.g.*, Dkt. No. 78 ¶ 10), the Court adopts VR Optics' proposal in full. The Court therefore concludes that a POSITA for the '513 patent would be an engineer with at least a bachelor's level degree in engineering and two or more years' experience working as an engineer designing and/or developing computerized fitness or exercising equipment.

A. “Control the Display” and “Drive the Display”

Claim Language	Claim(s)	Plaintiff's Proposed Construction	Defendant's Proposed Construction
“control the display”	6, 18, 19	Plain and ordinary meaning	Indefinite
Claim Language	Claim(s)	Plaintiff's Proposed Construction	Defendant's Proposed Construction
“drive the display”	1	Plain and ordinary meaning	Indefinite

Peloton makes two separate arguments as to why these two claim terms should be construed as indefinite under 35 U.S.C. 112, ¶ 2. First, Peloton argues that the claims in which these terms appear impermissibly claim both an apparatus *and* a method of using that apparatus, running up against Federal Circuit holdings forbidding such dual claiming. (Dkt. No. 77 at 10–11, 14.) Second, Peloton argues that the patent's use of the different words “control” and “drive” in an otherwise identical manner renders both of these terms indefinite, because these separate words are presumed to have different meanings that the '513 patent fails to disclose with reasonable certainty. (Dkt. No. 77 at 12–13.)

VR Optics disputes both of these conclusions. First, VR Optics contends that these terms are both part of pure apparatus claims, and that the Federal Circuit permits the use of functional language to describe a claimed apparatus. (Dkt. No. 85-1 at 11–12.) Second, VR Optics cites

Federal Circuit authority permitting patentees to use different words to describe the same subject matter or similar concepts. (Dkt. No. 75 at 24–25.)

It is Peloton’s burden to establish the indefiniteness of these claim terms, and indefiniteness must be proven by clear and convincing evidence. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017). Peloton fails to meet that burden here.

The Court first addresses Peloton’s argument that these claim terms impermissibly claim both an apparatus *and* a method of using that apparatus. The Federal Circuit has “held that ‘reciting both an apparatus and a method of using that apparatus renders a claim indefinite under section 112, paragraph 2.’” *Rembrandt Data Techs., LP v. AOL, LLC*, 641 F.3d 1331, 1339 (Fed. Cir. 2011) (quoting *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005)). Such dual-claiming is indefinite because a “manufacturer or seller of the claimed apparatus would not know from the claim whether it might also be liable for contributory infringement because a buyer or user of the apparatus later performs the claimed method of using the apparatus.” *IPXL Holdings, L.L.C.*, 430 F.3d at 1384.

In *Rembrandt*, the plaintiff conceded that the relevant claim language as written included both an apparatus and a method for using the apparatus, and acknowledged that the court construing the claim would need to insert additional apparatus language into the claim to mitigate that issue. *Rembrandt Data Techs., LP*, 641 F.3d at 1339 (“Rembrandt requests this court to insert ‘transmitter section for’ into the final element of claim 3, thereby adding an apparatus and rendering the claim valid.”). Similarly, the language of the relevant claim term in *IPXL Holdings* clearly included within its scope both a “system” and different ways a “user uses the [system].” *IPXL Holdings, L.L.C.*, 430 F.3d at 1384 (emphasis omitted).

The claim terms at issue here are unlike those that the Federal Circuit rejected in *Rembrandt* and *IPXL Holdings*. VR Optics correctly disputes Peloton’s contention that the ’513 patent’s references to “[controlling/driving] the display” clearly encompass both apparatus and methods of using that apparatus. Instead, an examination of the relevant claim terms in context reveals that they are limited to a claimed apparatus, an apparatus which itself functions to “[drive/control] the display.”

For example, claim 6 includes the following limitation: “logic configured to control the display in response to both the first and second performance parameters, such that a performance comparison between the fitness equipment and at least one remote fitness equipment is visually displayed.” (Dkt. No. 1-1 col. 24 ll. 2–6.) The claimed invention here is the apparatus itself, which the claim describes as including logic that performs the claimed functions. The claimed invention thus does not call for the user to perform or utilize the apparatus in any specified way. Instead, the invention merely describes how the claimed apparatus itself is capable of functioning. “A patent applicant is free to recite features of an apparatus either structurally or functionally.” *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997). That is all that the ’513 patent applicant did with the claims at issue here. Accordingly, the claim limitations using the terms “control/drive the display” are not indefinite for including both an apparatus and a method for using that apparatus.

Peloton’s second argument is that the patentee’s varying use of “drive” and “control” to describe identical functions without providing a method for distinguishing the meaning of these two words renders both terms indefinite. But the Federal Circuit has explained that “[d]ifferent terms or phrases in separate claims may be construed to cover the same subject matter where the written description and prosecution history indicate that such a reading of the terms or phrases is

proper.” *Nystrom v. TREX Co.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005). For example, the Federal Circuit has previously declined to mandate separate constructions of a patent’s varying uses of the words “connected” and “associated” to describe identical concepts, instead holding that “the context does not show that ‘connected’ and ‘associated’ should be differentiated . . . , and we must conclude that this is simply a case where the patentee used different words to express similar concepts, even though it may be confusing drafting practice.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1120 (Fed. Cir. 2004).

Similarly here, Peloton points to no evidence intrinsic to the patent indicating that these terms were intended to describe different functions. Instead, the consistent manner in which the specification describes the invention’s display functions, and the nearly identical contexts of these terms’ usages in the claim limitations, indicates that the patentee simply chose to use a different word, namely “drive” instead of “control,” to describe the same otherwise clear function. This may have been poor drafting, but that poor drafting does not provide clear and convincing evidence sufficient to render these claim terms indefinite.

Accordingly, the Court affords the claim terms “control the display” and “drive the display” their plain and ordinary meaning.

B. “Course Data” and Related Terms

Claim Language	Claim(s)	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“course data” / “course”	5, 9, 18, 19	<p>“course data” as “data defining a particular interactive exercise activity (for example, a spin class, a treadmill class, a race, etc.)”</p> <p>“course” as “a particular interactive exercise activity (for example, a spin class, a treadmill class, a race, etc.)”</p>	<p>“course data” as “data defining at least a route and distance”</p> <p>“course” as plain and ordinary meaning</p>

The parties' disputes regarding the construction of the claim terms "course data" and "course" turn on whether the types of "courses" covered by these claims need to be construed in a limiting or broadening manner.

Peloton proposes that "course data" be construed as "data defining at least a route and distance," because, according to Peloton, the specification clearly and consistently uses the word "course" to refer only to virtual race courses that follow a set route and distance. (Dkt. No. 77 at 16–19.) Peloton adds that construing the scope of "course" as covering a broader range of exercise activities would run afoul of the plain terms of certain of the claim limitations, which clearly employ the word "course" in exclusively spatial terms. (Dkt. No. 77 at 20–21; *see, e.g.*, Dkt. No. 1-1 col. 24 ll. 16–17 ("such that a user's relative position on a course is determined and maintained").) At the *Markman* hearing, counsel for Peloton disclaimed the need to construe "course" differently from the phrase "course data," and conceded that its proposed construction of "course data" would be sufficient for purposes of this case. (Dkt. No. 110-5 at 63–64.)

VR Optics proposes that the word "course" as used in the '513 patent's references to "course data" should not be so limited, but rather should be construed to include any "particular interactive exercise activity (for example, a spin class, a treadmill class, a race, etc.)." (Dkt. No. 75 at 15.) VR Optics cites to portions of the patent specification where, it asserts, "course" is used open-endedly to refer to indeterminate types of events or activities. (Dkt. No. 75 at 16.)

The intrinsic evidence of the '513 patent favors Peloton's proposed construction. The Court starts with an examination of the use of the phrases "course" and "course data" in the claim limitations themselves. "Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc). Only

Peloton's construction of "course" is consistent with the use of the phrase in each of the '513 patent's claim limitations. For example, the '513 patent includes, in relevant part, the following claim limitation: "logic to compare the first performance parameters with course data, such that a user's relative position on a course is determined and maintained." (Dkt. No. 1-1 col. 24 ll. 14–17.) Adopting VR Optics' proposed construction would require construing this claim as referring to a user's "position on a spin class," which is nonsensical. Other claim terms refer to a user's "current position" on a "course" relative to a computer-generated "racer." (Dkt. No. 1-1 col. 25 l. 54 – col. 26, l. 15.) Again, adopting VR Optics' proposed construction of "course" as expressly including within its scope spin classes renders these claim terms nonsensical, a strongly disfavored result under the principles of claim construction.

Consistent with the usage of the terms "course" and "course data" in these claim limitations, the specification's preferred embodiments also exclusively use the word "course" to refer to courses involving route and distance, such as "racing courses." (*See, e.g.*, Dkt. No. 1-1 col. 6 ll. 60–63; col. 7 ll. 3–9; col. 8 ll. 29–36.) For example, the specification uses the word "courses" in parallel with the phrase "racing circuits," and it frequently uses spatial and physical descriptors such as "layout, distances, terrain, scenery, etc." to describe a "course." (*Id.*) And all of the figures in the '513 patent displaying what a user would experience or perceive when using the invention represent the user traversing a race course or a physical space. (Dkt. No. 1-1 figs. 2–5B.)

VR Optics' selective quotations from other portions of the specification do nothing to rebut this conclusion. For example, VR Optics cites a portion of the specification that uses the phrase "course data" to refer to the environmental graphics that competing virtual-bicycle racers might perceive when using the invention. (Dkt. No. 75 at 16 (citing Dkt. No. 1-1 col. 11 l. 61 –

col. 12 l. 21.)) This usage of “course data” in a portion of the specification describing racers and their physical environment only buttresses the conclusion that the phrase “course data” is intended to convey a physical race course to be traversed by the user. The other portions of the specification cited by VR Optics are similarly unavailing. (*See* Dkt. No. 75 at 16 (citing Dkt. No. 1-1 col. 15 ll. 10–13 (“[O]ne embodiment of the present invention . . . effectively defines a course over which a competitive race or event is to take place.”); col. 16 ll. 13–18 (describing “courses that a user may select among for competing in a given race”))).)

VR Optics also points to the “Background of the Invention” section of the ’513 patent, which describes the rising popularity of “Spinning Classes” and “Treadmill Classes.” (Dkt. No. 1-1 col. 1 l. 65 – col. 2 l. 9.) But importantly, the patentee refers to these activities using the word “classes” rather than “courses,” indicating that the patentee viewed these classes as distinct from its invention’s “courses.” The consistent usage of the word “course” to refer to racing activities in all of the ’513 patent’s preferred embodiments and claim limitations, contrasted with the patentee’s use of a different word in the background section to describe “Spinning Classes” and “Treadmill Classes,” confirms rather than rebuts the propriety of Peloton’s proposed construction.

Accordingly, the Court construes “course data” as “data defining at least a route and distance,” and concludes that no further construction of “course” is necessary in light of that construction of “course data.”

Claim Language	Claim(s)	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“selected course”	5	“a particular interactive exercise activity (for example, a spin class, a treadmill class, a race, etc.) selected by a user”	Plain and ordinary meaning

In light of the Court’s construction of “course data” as “data defining at least a route and distance,” the Court concludes that no further construction of “course,” as that word is used in the claim term “selected course,” is necessary. It remains only for the Court to consider the parties’ dispute with respect to whether “selected course” must be construed to clarify the identity of the course’s selector. (Dkt. No. 75 at 18; Dkt. No. 77 at 29–30.)

With respect to VR Optics’ proposed introduction of the phrase “selected by a user” to the construction of this claim term, the Court finds this proposed addition to the limitation without support. The Federal Circuit has cautioned that “it is important not to import into a claim limitations that are not a part of the claim.” *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). While at times the specification describes the user as the selector of a course, “a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.” *Id.* Here, VR Optics does not point to any evidence, either intrinsic or extrinsic, justifying this substantive modification of the scope of a claim limitation. (Dkt. No. 75 at 18.) The Court therefore rejects VR Optics’ proposed construction of the claim term “selected course” and concludes that no further construction of that phrase is necessary.

Claim Language	Claim(s)	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“data defining course data for a selected course”	5	Plain and ordinary meaning	Indefinite

Peloton proposes that the phrase “data defining course data for a selected course” in claim 5 be construed as indefinite. (Dkt. No. 77 at 15.) It bases this proposed construction on the use of different phraseology to describe seemingly similar concepts in other claims, such as claim 8, which speaks of “data defining a selected course,” and claims 9, 18, and 19, which speak simply of “course data.” (*Id.*) According to Peloton, because “the patentee used three

irreconcilably different phrases in claims 5, 8, 9, 18 and 19, they must be given distinct meanings. Here, the specification provides no such disclosure and the phrase is, accordingly, indefinite.” (*Id.*)

VR Optics counters that the phrases used in claims 5, 8, 9, 18, and 19 are not irreconcilably different, but rather each is independently clear, despite their different usages of the underlying phrases “selected course” and “course data.” (Dkt. No. 85-1 at 15–16.) VR Optics asserts that the additional preface “data defining,” which is unique to claim 5, serves a purpose specific to that claim, namely limiting the types of “data” described in claim 1, on which claim 5 is dependent, as specifically “defining course data for a selected course.” (*Id.*)

Peloton fails to present clear and convincing evidence sufficient to render the disputed claim term indefinite. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017). Claim 5 reads in full as follows: “The system as defined in claim 1, where each fitness equipment further includes logic to download data defining course data for a selected course through the communication interface.” (Dkt. No. 1-1 col. 23 ll. 54–57.) In turn, claim 1, on which claim 5 is dependent, references data in the following claim limitation: “a communication interface through which data may be communicated to and from the fitness equipment.” (Dkt. No. 1-1 col. 23 ll. 27–28.) Standing alone, the meaning of these phrases is perfectly clear. Claim 1 lays claim to an apparatus capable of communicating data to and from fitness equipment, and claim 5 further provides that the data to be downloaded through that interface defines course data for a selected course. These “claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129. The extrinsic evidence in the record also supports this conclusion. (Dkt. No. 78 ¶ 46.)

The other claims highlighted by Peloton, each of which describe slightly different but similar functions to those claimed by claim 5, use the phrases “data defining a selected course” or simply “course data” rather than the disputed term “data defining course data for a selected course.” But Peloton does not assert that any of the varying subcomponents of each of these phrases (*e.g.*, “course data” and “selected course”) are themselves indefinite. (Dkt. No. 69-1 at 1, 3.) Furthermore, Peloton also does not dispute that each of the claims it points to contributes a substantively different feature to the claimed invention. Accordingly, the Court finds that the syntactical differences highlighted by Peloton in the wording of these various claims are indicative at most of “confusing drafting practice,” but the patentee’s consistent and clear use of the same underlying substantive component phrases in these claims supports the conclusion that “this is simply a case where the patentee used different words to express similar concepts.”

Innova/Pure Water, Inc., 381 F.3d at 1120.

In short, Peloton fails to identify clear and convincing evidence of the indefiniteness of the phrase “data defining course data for a selected course” in claim 5. The Court thus affords this phrase its plain and ordinary meaning, subject to the construction of “course data” the Court has adopted above.

C. “Interactive Exercise Events” and “Interactive Fitness Equipment”

Claim Language	Claim(s)	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“interactive exercise events”	1	“exercise activity involving a plurality of participants (for example, spinning classes, treadmill classes, races, etc.)”	Plain and ordinary meaning

VR Optics asks the Court to construe the term “interactive exercise events” as “exercise activity involving a plurality of participants (for example, spinning classes, treadmill classes, races, etc.).” (Dkt. No. 75 at 11–13.) To support its proposed construction, VR Optics

emphasizes the context of this term’s use in claim 1 of the ’513 patent. According to VR Optics, this context indicates that the “interactive” nature of the relevant events clearly encompasses interaction among a plurality of users. (*Id.*) Similarly, with respect to the scope of the claimed “exercise events,” VR Optics argues that the specification’s description of both races and classes supports its proposed construction, which would make the inclusion of those types of activities within the scope of claim 1 explicit. (*Id.*)

Peloton argues that “interactive exercise events” should be afforded its plain and ordinary meaning. (Dkt. No. 77 at 22.) Peloton relies on the Federal Circuit rule mandating that claim terms be given their plain and ordinary meaning rather than a limiting construction absent “any express disclaimer or independent lexicography in the written description that would justify adding that negative limitation.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). Peloton urges the Court to apply that rule here, because the term “interactive exercise events” is found nowhere in the specification, is used only once in claim 1 of the ’513 patent, and is sufficiently clear on its own to render an additional limiting construction unnecessary. (Dkt. No. 77 at 22–23.)

VR Optics’ proposed construction would improperly add limitations to claim 1 beyond the scope of the ’513 patent’s otherwise allowed-for claims. For example, VR Optics’ introduction of the requirement that an “interactive exercise event” involve a “plurality of participants” would substantively alter the plain and ordinary meaning of the claim term in violation of the ’513 patent’s clear indication that some “interactive” activities involve only one participant. (*See, e.g.*, Dkt. No. 1-1 col. 8 ll. 4–28 (describing a method of using the invention in which single users can race against themselves).) Consistent with this preferred embodiment, claim 1 as actually written would include within its scope a single user engaging in “interactive

exercise events” involving himself interacting with the invention alone. VR Optics’ construction mandating that “interactive exercise events” necessarily involve a plurality of users would exclude this preferred embodiment from the scope of claim 1, a strongly disfavored result. *See Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1333 (Fed. Cir. 2013) (“[A]n interpretation which ‘excludes a [disclosed] embodiment from the scope of the claim is rarely, if ever, correct.’”) (second alteration in original) (quoting *Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 707 F.3d 1318, 1326 (Fed. Cir. 2013))).

VR Optics also fails to identify an “express disclaimer or independent lexicography in the written description that would justify adding that negative limitation.” *Omega Eng’g*, 334 F.3d at 1323. The sole mention of the phrase “interactive exercise events” in the entire ’513 patent is its use in the final claim limitation of claim 1. Still, VR Optics urges that its limiting construction is supported by the specific context of its use in claim 1, which reads in full as follows:

a computer program executed by the server to configure the server for coordinating the communication among the plurality of fitness equipment, such that a plurality of the geographically-separated fitness equipment may simulate interactive exercise events.

(Dkt. No. 1-1 col. 23 ll. 35–39.) Contrary to VR Optics’ contentions, this context does not foreclose the possibility that the plurality of linked fitness equipment could simulate for each individual user his or her own individual interactive exercise event. As such, context alone fails to “reveal[] . . . express intent to confer on the claim language the novel meaning imparted by [VR Optics’ proposed] negative limitation. Accordingly, [this Court] must conclude that there is no basis in the patent specification for adding the negative limitation.” *Omega Eng’g*, 334 F.3d at 1323.

The same conclusion is warranted with respect to VR Optics’ proposal that the term “interactive exercise events” be construed to expressly include as examples “spinning classes, treadmill classes, races, etc.” Though the specification describes a range of exercise activities, its mention of some of these activities does not necessarily warrant explicitly importing them into the language of the claim limitations themselves. *See SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“[A] particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.”). Moreover, the patent’s mention of spinning and treadmill classes is limited to a brief discussion in the background section. (Dkt. No. 1-1 col. 1 l. 67 – col. 2 l. 9.) This one mention also fails to “reveal[] . . . express intent to confer on the claim language the novel meaning imparted by [VR Optics’ proposed] negative limitation. Accordingly, [this Court] must conclude that there is no basis in the patent specification for adding the negative limitation.” *Omega Eng’g*, 334 F.3d at 1323.

The phrase “interactive exercise events” will thus be afforded its plain and ordinary meaning.³

Claim Language	Claim(s)	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“interactive fitness equipment”	6, 9, 12, 13, 15, 16, 17, 18, 19	“exercise equipment such as treadmills, rowing machines, bicycles, stair or stepping machines, skiing machines, etc., communicatively coupled, directly or indirectly, with other exercise equipment”	“single piece of interactive fitness equipment”

³ In so holding, the Court recognizes, as it did at the *Markman* hearing, that the plain and ordinary meaning of the phrase “interactive exercise events” does not on its face necessarily exclude any particular exercise event by virtue of its having a plurality of participants or because that event is a spin class, treadmill class, or otherwise. (Dkt. No. 110-5 at 89–90, 96–98.)

VR Optics proposes that the claim term “interactive fitness equipment” be construed as “exercise equipment such as treadmills, rowing machines, bicycles, stair or stepping machines, skiing machines, etc., communicatively coupled, directly or indirectly, with other exercise equipment.” (Dkt. No. 75 at 13–15.) VR Optics argues that the phrase’s plain meaning fails to account for the manner in which any single piece of the claimed equipment is intended to be coupled with other pieces of similar equipment for cooperative interactions. (*Id.*)

Peloton argues that the claim term “interactive fitness equipment” does not require any construction, but urges that if the term is to be construed it should be construed as a “single piece of interactive fitness equipment.” (Dkt. No. 77 at 24.) In support of its proposed addition of the words “single piece of,” Peloton notes that the two independent claims to use the term do so with the singular article “*an*” prefacing the phrase, and that subsequent dependent claims and the specification use the phrase in singular form. (Dkt. No. 77 at 24–25.)

The Court agrees with Peloton to the extent that it asserts that the phrase “interactive fitness equipment” requires no additional construction. VR Optics’ proposed construction inserting the requirement that “interactive fitness equipment” be “coupled, directly or indirectly, with other exercise equipment” would render subsequent dependent claim terms redundant. For example, dependent claim 12 provides: “[t]he interactive fitness equipment as defined in claim 6, further including a communication interface.” (Dkt. No. 1-1 col. 24 ll. 28–29.) But if the core term “interactive fitness equipment” is construed as inherently “communicatively coupled” with other equipment, the entirety of claim 12—which serves only to add to the “interactive exercise equipment” described in claim 6 an interface capable of communicating—becomes superfluous. This is a disfavored result under the principles of claim construction. *Phillips*, 415 F.3d at 1315

(“[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”).

The specification further indicates that the patentee’s use of the word “interactive” does not necessarily indicate communicative coupling with other fitness equipment. For example, the specification uses “interactive” in the following manner in describing one preferred embodiment of the invention: “It will be appreciated that the embodiment . . . may allow a user to compete against his or her own skill sets from day to day, and effectively provide an interactive and real-time racing environment.” (Dkt. No. 1-1 col. 19 ll. 50–53.) This description makes clear that the patentee conceived that its invention’s “interactive” functions could be employed by a single user engaging with the invention alone, undermining VR Optics’ assertion that based on the “intrinsic evidence ‘interactive fitness equipment’ is understood to refer to exercise equipment that is coupled . . . to other exercise equipment.” (Dkt. No. 75 at 14.) Instead, the intrinsic evidence of the patent indicates that “interactive fitness equipment” is capable of functioning both independently *and* in communication with other coupled equipment.

By the same token, Peloton’s proposed addition of the qualification “single piece of” to the construction of “interactive fitness equipment” would serve only to confuse in the jury in that it may appear to foreclose the otherwise clear and consistent use of the phrase “interactive fitness equipment” in the ’513 patent to refer to such equipment both when coupled with other equipment and when used independently. This phrase as a whole is consistently and clearly used in accordance with its plain and ordinary meaning throughout the ’513 patent, and the Court sees no need to construe the claim otherwise for the benefit of the fact-finder.

Finally, the Court sees no need to supplement the plain and ordinary meaning of the phrase “interactive fitness equipment” with VR Optics’ potentially confusing list referencing

specific types of covered “interactive fitness equipment.” Instead, construing the phrase in accordance with its plain and ordinary meaning is independently and sufficiently clear for the fact-finder with respect to the specific types of “interactive fitness equipment” claimed by the ’513 patent.

Accordingly, the Court will afford the phrase “interactive fitness equipment” its plain and ordinary meaning.

D. “Logic configured to” / “Logic” and Related Terms

Claim Language	Claim(s)	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“logic configured to” / “logic”	1, 5, 6, 9, 13, 16, 17, 18, 19	Plain and ordinary meaning; not a “means plus function” term under 35 U.S.C. § 112(6) or 35 U.S.C. § 112(f).	Subject to 35 U.S.C. § 112(f) (formerly 35 U.S.C. § 112, ¶ 6) and indefinite

Peloton argues that the ’513 patent’s claim terms using the phrases “logic” or “logic configured to” are means-plus-function terms subject to Section 112, ¶ 6. (Dkt. No. 77 at 4–6.) According to Peloton, this is because the word “logic” does not connote structure but is instead merely a placeholder word that describes only functions to be performed by the patent. (*Id.*) Peloton then surveys and fails to identify in the specification sufficient structures corresponding to each of the claimed functions for “logic.” (Dkt. No. 77 at 5–10.) Accordingly, Peloton would have all of the patent’s claims referencing “logic” be construed as invalid for indefiniteness. (Dkt. No. 77 at 10.)

VR Optics argues that the terms “logic configured to” and “logic” are not means-plus-function terms, and accordingly urges that the terms be given their plain and ordinary meaning. (Dkt. No. 75 at 27–30.) VR Optics emphasizes the presumption against applying Section 112, ¶ 6 to claims not using the word “means,” as well as the evidentiary burden required for Peloton to overcome that presumption. (Dkt. No. 75 at 27–28.) VR Optics asserts that the presumption

should govern here because a POSITA would understand “logic” as used in the ’513 patent to connote a reasonably definite structure. (Dkt. No. 75 at 28–30.)

References to “logic” and “logic configured to” are ubiquitous throughout the ’513 patent’s claim limitations. The following examples, drawn from claim 1, are typical of the ’513 patent’s use of the word:

- Logic configured to obtain first performance parameters from the at least one [sic] operating component;
- Logic configured to communicate the first performance parameters to a remote fitness equipment via the wide-area network and the server;
- Logic configured to receive second performance parameters communicated from at least one remote fitness equipment;
- Logic configured to drive the display in response to both the first and second performance parameters, such that a performance comparison between the fitness equipment and at least one remote fitness equipment is visually displayed.

(Dkt. No. 1-1 col. 23 ll. 19–35.)

Because none of these claim terms uses the word “means,” there is a presumption that Section 112, ¶ 6 does not apply and that these are not means-plus-function terms. *Williamson*, 792 F.3d at 1348. Though not a “strong” presumption, *see id.* at 1349, to overcome it Peloton must affirmatively demonstrate that the claim terms fail to “recite[] sufficiently definite structure” or else recite “function without reciting sufficient structure for performing that function,” *id.* at 1348 (alteration in original) (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)). Peloton must make such a showing by a preponderance of the evidence, in reliance on intrinsic and extrinsic evidence as interpreted through traditional claim construction principles. *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007 (Fed. Cir. 2018).

Peloton has not met that evidentiary burden here. Most of Peloton’s arguments with respect to why the ’513 patent’s claims involving “logic configured to” constitute means-plus-function terms are “couched in conclusory language.” *Id.* at 1008. For example, in describing

the claim limitations from claim 1 quoted above, Peloton asserts simply that “[n]one of these claim limitations disclose *any* structure to accomplish [the claimed] functions.” (Dkt. No. 77 at 5.) After again quoting another portion of a disputed claim limitation, Peloton adds the conclusion that “‘logic’ is not a structure.” (*Id.*) But for purposes of claim construction, “[a]ttorney argument is not evidence.” *Elcommerce.com, Inc. v. SAP AG*, 745 F.3d 490, 506 (Fed. Cir. 2014), *vacated on other grounds*, 564 F. App’x 599 (Fed. Cir. 2014). The Federal Circuit has explicitly rejected such conclusory legal assertions as a substitute for the evidentiary support required to overcome the presumption against the application of Section 112, ¶ 6. *Zeroclick, LLC*, 891 F.3d at 1008. Peloton’s naked assertions that logic is not structure do not supplant its burden to point to “record evidence that supports its ultimate conclusion regarding whether § 112, ¶ 6 applies to the asserted claims.” *Id.*

Turning to that evidence here, the Court finds that it supports a conclusion that the use of the term “logic” in the ’513 patent’s claim limitations would be readily understood by a POSITA to connote a sufficiently definite structure. Starting with the claim limitations themselves, the patentee’s choice to use the word “logic” rather than a “nonce” word such as “means,” “mechanism,” or “element” indicates that the word “logic” serves as more than a mere placeholder but actually refers to a specific structure. *See Williamson*, 792 F.3d at 1350; *see also Smartflash LLC v. Apple Inc.*, 77 F. Supp. 3d 535, 540 (E.D. Tex. 2014) (“Even if a term covers a broad class of structures and identifies structures by their function, it is sufficient to avoid means-plus-function treatment. What is important is whether the term is understood to describe structure and is not simply a substitute for ‘means for.’” (internal citation omitted)). Here, bypassing the word “logic” and construing the claim limitations as disclosing only function would essentially delete a word expressly included in the claim terms, which the Federal Circuit

has warned is legal error. *See Zeroclick, LLC*, 891 F.3d at 1009 (“The district court thus erred by effectively treating ‘program’ and ‘user interface code’ as nonce words and concluding in turn that the claims recited means-plus-function limitations.”). Instead, the placement and use of the term “logic” in the claim limitations indicates that the term connotes some specific and definite structure.

The specification further buttresses this understanding of the claim terms. The specification provides numerous diagrams depicting how “logic” is intended to be incorporated into the proposed invention. (*See, e.g.*, Dkt. No. 1-1 figs. 14–19.) Each of these diagrams depicts “logic” in a manner identical to the depiction of other structural components employed by the invention, such as microphones, speakers, fitness equipment, communication interfaces, operating components, and heart rate sensors. (*Id.*) The placement of “logic” alongside and in the same format as these other clearly structural terms highlights that the ’513 patent is using the term logic to connote a known structure rather than as a nonce substitute for the word “means.”

Finally, the extrinsic evidence in the record further supports the conclusion that “logic” as used in the ’513 patent connotes a specific and definite structure. VR Optics submitted the declaration of a POSITA who reviewed the ’513 patent and determined that “the structure of the ‘logic configured to’ is readily apparent from the claim language itself” and that “the structure recited in the claim is sufficient for a POS[IT]A to carry out the desired function.” (Dkt. No. 78 ¶ 48.) Though of course of less value than the intrinsic evidence contained in the patent, this extrinsic evidence confirms the Court’s construction of “logic” as connoting structure.

Even if all of this evidence were ambiguous or weighed slightly in Peloton’s favor, which it does not, the Court would still be constrained from construing these claims as means-plus-function terms because of the presumption against doing so in the absence of the word “means.”

See *Williamson*, 792 F.3d at 1348. Peloton produces no evidence to rebut this presumption, let alone a preponderance of such evidence. As such, Peloton has not “*demonstrate[d]* that [each] claim term [referencing ‘logic’] fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function,” which bars this Court from adopting its proposed construction of the relevant claim terms as means-plus-function claims. *Zeroclick, LLC*, 891 F.3d at 1007 (quoting *Williamson*, 792 F.3d at 1348). Accordingly, the terms “logic” and “logic configured to” in the disputed claim limitations will be afforded their plain and ordinary meaning.

Claim Language	Claim(s)	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“logic configured to drive the display in response to both the first and second performance parameters, such that a performance comparison between the fitness equipment and at least one remote fitness equipment is visually displayed”	1	“logic configured to drive the display to visually display a difference in performance between the fitness equipment and at least one remote fitness equipment based on a difference between the first and second performance parameters”	Plain and ordinary meaning (subject to the proposed constructions for terms within this limitation)
Claim Language	Claim(s)	Plaintiff’s Proposed Construction	Defendant’s Proposed Construction
“logic configured to control the display in response to both the first and second performance parameters, such that a performance comparison between the fitness equipment and at least one remote fitness equipment is visually displayed”	6	“logic configured to control the display to visually display a difference in performance between the fitness equipment and at least one remote fitness equipment based on a difference between the first and second performance parameters”	Plain and ordinary meaning (subject to the proposed constructions for terms within this limitation)

These two claim terms are restated in nearly identical forms in claims 1 and 6, with the only difference between them being that claim 6 replaces claim 1’s use of “drive” with “control.” (Dkt. No. 1-1 col. 23 ll. 30–35; col. 24 ll. 2–6.) Peloton’s proposed construction for these terms is their plain and ordinary meaning, while VR Optics’ proposed construction for these terms is derived from statements made in the patent specification. (Dkt. No. 75 at 20–23; Dkt. No. 77 at 26–28.)

The Court finds VR Optics’ proposed construction to be fully consistent with the plain and ordinary meaning of the claim terms. The only substantive phrase added by VR Optics’ proposed construction is the phrase “a *difference* in performance” (emphasis added). This addition does not alter the scope of the patent’s already-claimed functions. As used in the ’513 patent, the display of a “comparison” between the performances of two users would look identical to the display of a “difference” between the performances of those two users. VR Optics’ proposal is also consistent with all of the numerous descriptions of the “comparison” displays provided in the specification. (*See, e.g.* Dkt. No. 1-1 col. 5 ll. 29–33 (“The displays, however, on the various fitness equipment may provide a visual read indication [that] show[s] where the particular user is in relation to the user or users that are operating the coupled fitness equipment.”); fig. 2.).

Peloton counters that the addition of the phrase “difference” materially alters the scope of the claim because the “comparison” of two identically-performing users, which the plain and ordinary language of the ’513 patent would otherwise permit, would be foreclosed by VR Optics’ proposed introduction of the word “difference.” But the display of a “difference in performance” does not foreclose the display of a difference of zero. Both the plain language of the ’513 claim and VR Optics’ proposed construction would equally permit this sort of display. VR Optics clarified this point in its reply brief. (Dkt. No. 85-1 at 11 (“[I]f both users had the same speed . . . , the difference in performance could be shown in the text as ‘lead by 0.00 miles’ and ‘lead 0.0 seconds.’ This could also be reflected in a ranking where the users are shown as sharing the same position (i.e., having no difference in position).”.) Peloton thus identifies no way in which VR Optics’ proposed construction fails to align with its own understanding of the plain and ordinary meaning of the relevant claim limitations.

A restatement of these disputed claim terms in plainer language may be helpful for the fact-finder, and VR Optics’ proposed constructions are consistent with the claim terms’ plain and ordinary meaning as well as with the ’513 patent specification. As such, the Court adopts VR Optics’ proposed constructions:

- Claim 1: “logic configured to drive the display in response to both the first and second performance parameters, such that a performance comparison between the fitness equipment and at least one remote fitness equipment is visually displayed” will be construed as “logic configured to drive the display to visually display a difference in performance between the fitness equipment and at least one remote fitness equipment based on a difference between the first and second performance parameters.”
- Claim 6: “logic configured to control the display in response to both the first and second performance parameters, such that a performance comparison between the fitness equipment and at least one remote fitness equipment is visually displayed” will be construed as “logic configured to control the display to visually display a difference in performance between the fitness equipment and at least one remote fitness equipment based on a difference between the first and second performance parameters.”

E. “One [element] selected from the group consisting of”

Term	Claim(s)	Plaintiff’s and Defendant’s Proposed Constructions
“one [element] selected from the group consisting of”	2, 3, 4, 13, 18, 19	Interpreted as Markush Group

The parties both propose that the claim term “one [element] selected from the group consisting of” be interpreted as a Markush group. The Court therefore adopts the parties’ consented-to construction.

IV. Conclusion

For the foregoing reasons, the Court adopts the constructions set forth in this Opinion.

SO ORDERED.

Dated: November 5, 2018
New York, New York



J. PAUL OETKEN
United States District Judge